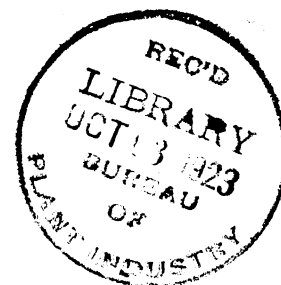


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PLANT IMMIGRANTS

No. 208

August, 1923

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Plates

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Foreign Seed and Plant Introduction

EXPLANATORY NOTE

This circular is made up principally of notes received from agricultural explorers, foreign collaborators, and correspondents, concerning the more important plants which have been received recently by the Office of Foreign Seed and Plant Introduction. It also contains reports on the behavior of plants which have been introduced in previous years.

Descriptions appearing here are revised and later published in the Inventory of Seeds and Plants Imported,-- the permanent record of plant introductions made by this Office.

Plant Immigrants should be considered merely an ANNOUNCEMENT OF THE ARRIVAL OF PLANT MATERIAL. As a rule all material is propagated before being distributed; this may require several years.

The Annual Catalogue of New Plant Introductions describes briefly the plants available for distribution. Application for seeds or plants listed in Plant Immigrants may be sent at any time, however, and will be filed in the order of their receipt. When material is ready for distribution, these requests will be given first attention; if their number is sufficient to exhaust the available supply of a given species, it will not be included in the Annual Catalogue.

Plant breeders and experimenters who desire plants not available in this country are invited to correspond with this Office which will endeavor to secure the required material through its agricultural explorers, foreign collaborators, or correspondents.

DAVID FAIRCHILD
*Agricultural Explorer in Charge,
Office of Foreign Seed and Plant Introduction.*

Issued September 26, 1923. Washington, D. C.

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ACANTHOPANAX SENTICOSUS (Araliaceae), 57274. From Echo, Manchuria, China. Seeds presented by A. D. Woeikoff, director, Experimental Farm. No. 40. "A very spiny shrub bearing palmately divided leaves and having at the ends of its long shoots small umbels of black berries. It grows generally in dense shade, and may be of use as a park or garden shrub or as an undergrowth beneath tall trees." (Frank N. Meyer.)

ARECA sp. (Phoenicaceae), 57217. **Palm.** From Manila, Philippine Islands. Seeds presented by P.J. Wester, Bureau of Agriculture. "A very graceful dwarf palm, with a slender trunk about two inches in diameter, from Palawan. It ought to be a good conservatory plant." (Wester.)

ARTOCARPUS COMMUNIS (Moraceae), 57224. **Breadfruit.** From Honolulu, Hawaii. Plants presented by W. T. Pope, horticulturist, Agricultural Experiment Station. "There is but one kind of breadfruit in Hawaii; while there are slight variations, due probably to local conditions, there are no true varietal differences." (Pope.)

This variety which now grows wild throughout the Hawaiian Islands, was originally introduced from Tahiti. It has large, rough, ovate, deeply lobed leaves, and the staminate flowers appear in large yellow catkins. The large-stemmed fruit is either round or oblong and varies from 5 to 8 inches in diameter. The thick, tough rind, which is brownish at maturity, incloses a firm, very starchy, and somewhat fibrous pulp which becomes mealy when cooked, slightly resembling a dry sweet potato, and is much esteemed as an article of diet. The tree is propagated by suckers or by layering. (Adapted from G. P. Wilder, *Fruits of the Hawaiian Islands*, p. 100, pl. 48, under *Artocarpus incisa*.)

CALYDOREA SPECIOSA (Iridaceae), 57220. From Santiago, Chile. Bulbs presented by Dr. Carlos Camacho. An ornamental bulbous plant about 4 inches high, native to Chile, where it generally prefers the lower altitudes. The flower, about 2 inches wide, is a bright navy-blue with a golden center. The bulbs are eaten boiled, roasted, or baked. (Adapted from note of Jose D. Husbands, under S. P. I. No. 30074.)

CHRYSLIDOCARPUS BARONII (Phoenicaceae), 57214. **Palm.** From Algiers, Algeria. Seeds presented by Dr. L. Trabut, government botanist. A medium-sized palm, native to central Madagascar, with a cylindrical stem about 3 inches in diameter, and regularly pinnate leaves about 4 feet long, with very narrow pinnae 16 to 18 inches long. Native name "farihazo." (Adapted from Engler, *Botanische Jahrbuecher*, vol. 38, Beiblatt 87, p. 33.)

EUONYMUS HAMILTONIANUS (Celastraceae), 57281. From Echo, Manchuria, China. Seeds presented by A. D. Woeikoff, director, Experimental Farm. No. 30. A large Himalayan shrub which under favorable circumstances becomes a moderate-sized tree, 30 to 35 feet high, with a short straight trunk 4 to 5 feet in girth. The clusters of 15 to 30 greenish white flowers are followed by yellow capsules the seeds of which are entirely surrounded by a scarlet aril. The fruit ripens from August onward. The leaves are brilliantly colored in fall. The wood is beautifully white, compact and close, not very hard, and is used for making spoons. The young shoots and leaves are lopped for fodder. (Adapted from Brandis, Forest Flora of India, p. 78, and Arnold Arboretum, Bulletin of Popular Information, No. 13, 1911.)

EXACUM ZEYLANICUM MACRANTHA (Gentianaceae), 57260. From Ceylon, India. Seeds presented by the governor of Ceylon, through Frank B. Noyes, Washington, D. C. An erect, slightly branched annual from the mountains of Ceylon, where it grows at an altitude of 6,000 feet. The stem, over a foot in height, is copiously leafy below, and bears a terminal cluster of large handsome flowers. The latter have deep, rich-purple petals and showy, bright-orange stamens. (Adapted from Curtis's Botanical Magazine, pl. 4771.)

GOMPHOCARPUS PHYSOCARPUS (Asclepiadaceae), 57269. From Burringbar, New South Wales. Seeds presented by B. Harrison. "A tall-growing plant which bears balloonlike pods containing brown seeds furnished with tufts of fine silky cotton." (Harrison.)

A branched plant 2 or 3 feet high, with opposite, very narrow, sharp-pointed leaves, and 6 to 10-flowered umbels of small, white flowers. (Adapted from Thiselton-Dyer, Flora of Tropical Africa, vol. 4, sect. 1, p. 328.)

HAKEA NODOSA (Proteaceae), 57211. From Hobart, Tasmania. Seeds presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. An ornamental Australian shrub, 2 to 6 feet in height, with slender branches, short, needlelike or extremely narrow leaves crowded on the stems, and axillary clusters of very small flowers. (Adapted from Bentham, Flora Australiensis, vol. 5, p. 514.)

JUNIPERUS RIGIDA (Pinaceae), 57298. **Juniper.** From Echo, Manchuria, China. Seeds presented by A. D. Woeikoff, director, Experimental Farm. No. 2. A Japanese juniper which is a tree about 20 feet in height, and of elegant habit with the branches pendulous at the ends. The needlelike leaves are very slender and triangular in section. The tree thrives very well in southern England. (Adapted from Bean, Trees and Shrubs Hardy in the British Isles, vol. 1, p. 569.)

LILIUM SULPHUREUM (Liliaceae), 57676. **Lily.** From Darjiling, India. Bulbs presented by G. H. Cave, curator, Lloyd Botanic Garden, through Harold Shantz, American vice consul in charge, Calcutta. A large and handsome lily, native to northern Burma, with an erect green stem 6 or 7 feet high, and numerous, scattered, linear, bright-green leaves, the longest of which are about 4 inches long and near the base of the plant. The flowers, usually in clusters of 2 or 3, are pendent on long peduncles, fragrant, and sulphur-yellow, tinged outside with light red. (Adapted from Curtis's Botanical Magazine, pl. 7257.)

MEDICAGO SATIVA (Fabaceae), 57678. **Alfalfa.** From Moron, Buenos Aires, Argentina. Seeds presented by Jose M. Scasso, district agronomist, Argentine Ministry of Agriculture. "'Alfalfa saludina.' A variety from the province of Santiago del Estero. It is very hardy and resistant to trampling and after cutting grows up again with much vigor. On the other hand it has the defect of losing its leaves when ripe, for which reason it is cut for hay when it is just beginning to flower. If not cut frequently it has a tendency to become woody. Under irrigation it gives 7 or 8 cuttings of green forage per year in Santiago del Estero. It is called 'saludina' because it is more resistant to alkali and saltpeter than the ordinary variety." (Scasso.)

NAGEIA THUNBERGII (Taxaceae), 57267. From Hogsback, via Lovedale, Cape of Good Hope, South Africa. Seeds presented by David A. Hunter. "This tree grows slowly, but finally becomes very large. The timber is fine-grained, and is largely used in our shops for furniture." (Hunter.)

A fine evergreen timber tree, up to 100 feet tall and with a trunk 4 feet in diameter, which occurs throughout all the timber forests from the Cape of Good Hope to Natal. The quality of the wood of this species is very similar to that of *Nageia elongata*, and for most purposes they are used indiscriminately. (Adapted from Sim, Forest Flora of Cape Colony, p. 332.)

OSBECKIA RUBICUNDA (Melastomaceae), 57261. From Ceylon, India. Seeds presented by the governor of Ceylon, through Frank B. Noyes, Washington, D. C. A branched shrub, 4 to 6 feet in height, with hairy elliptic leaves about 2 inches long, and brilliant purplish crimson flowers borne in clusters of one to five. Native to Ceylon. (Adapted from Macmillan, Handbook of Tropical Gardening, p. 393, and from Hooker, Flora of British India, vol. 2, p. 520.)

POA AUSTRALIS (Poaceae), 56910. From Hobart, Tasmania. Seeds presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. "Collected near Lake Tiberius at an altitude of about 1,400 feet. This is a rather cold area with a light rainfall." (Evans.)

This is the most abundant grass in many districts of South Island, New Zealand, and is also plentiful in the elevated central portions of North Island. It is seldom eaten by stock, however, except in the absence of better food. (Adapted from Cheeseman, Manual of the New Zealand Flora, p. 908.)

PRUNUS MAACKII (Amygdalaceae), 57310. **Cherry.** From Echo, Manchuria, China. Seeds presented by A. D. Woeikoff, director, Experimental Farm. No. 22. A Manchurian bird cherry, 40 feet or more in height, with very smooth brownish yellow bark which peels off like that of a birch. The leaves are pointed and very finely toothed, and the white flowers are in short racemes borne on the previous season's wood. (Adapted from Bean, Trees and Shrubs Hardy in the British Isles, vol. 2, p. 242.)

RHAMNUS spp. (Rhamnaceae), 57311 and 57312. **Buckthorn.** From Echo, Manchuria, China. Seeds presented by A. D. Woeikoff, director, Experimental Farm.

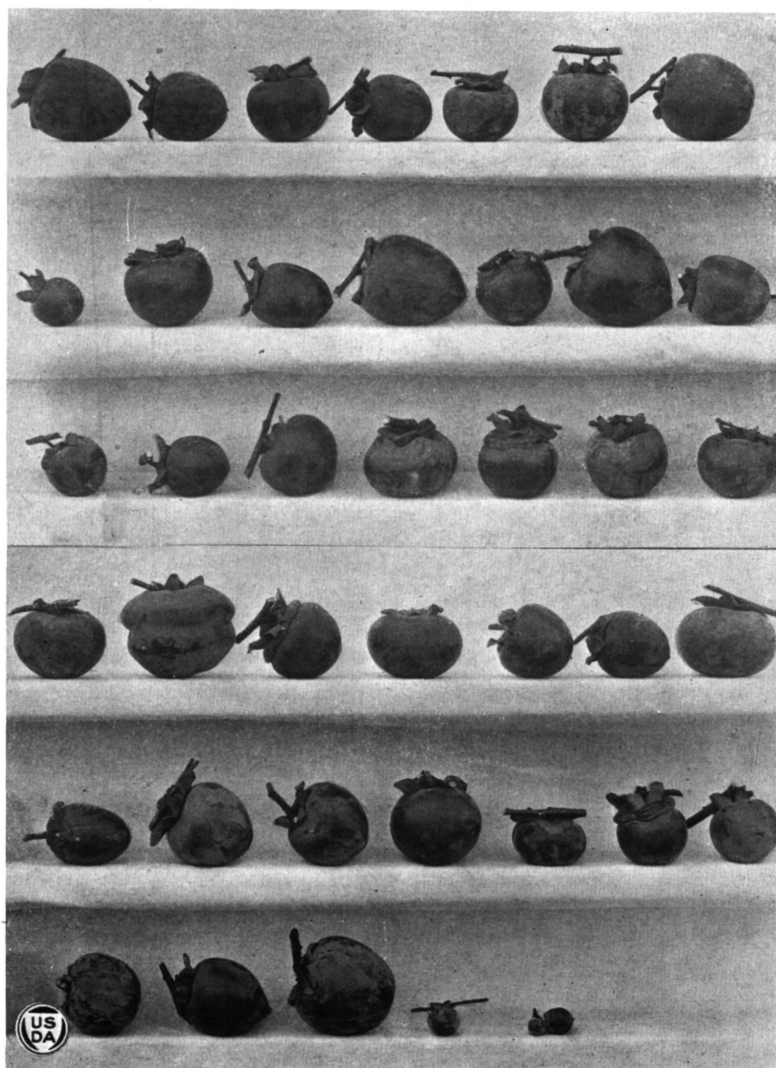
57311. **RHAMNUS DAVURICUS.** No. 33. A shrub or small tree, up to 30 feet in height, with more or less arching branches which are often thornless. The oblong or oval leaves are slender-pointed and finely toothed. The black fruits, in dense clusters, are about one-fourth of an inch in diameter. This species is native to northeastern China and Siberia, and is of value for rough shrubberies. (Adapted from Bean, Trees and Shrubs Hardy in the British Isles, vol. 2, p. 332.)

57312. **RHAMNUS PARVIFOLIUS.** No. 32. "A Rhamnus, of dense growth, having small foliage and bearing large jet black berries. This shrub does not grow tall, but is densely branched and assumes well-rounded forms when not mutilated. Of value as a garden or park shrub and as material for medium-sized hedges, especially for the drier sections of the United States." (F. N. Meyer.)

RUBUS MACRAEI (Rosaceae), 57226 and 57227. **Akala.** From Hilo, Hawaii. Seeds presented by L. W. Bryan, Hawaiian Sugar Planters' Association. "The Hawaiian giant raspberry, occurring at an altitude of about 6,000 feet, is a straight bush with the older branches thornless. The fruits, borne at the drooping tips of the branches, are very numerous, about 2 inches in diameter, and exceedingly juicy; the seeds are comparatively small. The flesh is slightly bitter but otherwise delicious. This berry is of great promise as it grows in a region where frost is not uncommon in the winter months. It should grow well in the regions of the Pacific coast." (J. F. Rock.)

57226. Red variety.

57227. Yellow variety.



THE KAKI OR JAPANESE PERSIMMON.

(*Diospyros kaki* L. f.)

One of the largest collections of kakis or Japanese persimmons in the United States is that maintained by the Office of Foreign Seed and Plant Introduction at Chico, Calif. Represented in this collection are the best of the 350 introductions which have been secured during the past twenty-five years from Japan and China, countries in which the kaki is cultivated extensively and where practically all varieties now known have had their origin. The range in form and size which occurs in this species is well illustrated by the above photograph, which shows the varieties fruiting at Chico in 1922. Among the most interesting ones are the following: Row 1, fruit 1, S. P. I. 13823, *Hachiya*, now the most common commercial variety, with yellow flesh and astringent; row 1, fruit 6, S. P. I. 13841, *Kuro kuma*, with dark flesh and nonastringent; row 1, fruit 7, S. P. I. 13846, *Shakumi*, also dark fleshed and nonastringent; row 4, fruit 2, S. P. I. 22362, *Tamopan*, with yellow flesh and astringent; row 4, fruit 7, S. P. I. 26491, *Fuyu*, yellow fleshed and very promising commercially because it is never astringent. The two small fruits in the bottom row are of *Diospyros lotus*. (Photographed by P. H. Dorsett, Plant Introduction Garden, Chico, Calif., October 20, 1922; P28345FS.)



THE FUYU KAKI.

(*Diospyros kaki* L. f.; S. P. I. No. 26491.)

Fuyu is one of the most promising varieties of kaki or Japanese persimmon which has been introduced by the Department of Agriculture. It has a rich, sweet, crisp flesh that is never astringent; can be picked, shipped, and eaten while firm and hard like an apple; has a somewhat flattened tomato shape that makes it desirable for shipping; can be grown wherever the other varieties of kaki succeed, and produces good crops. (Photographed by P. H. Dorsett at the Plant Introduction Garden, Chico, Calif., October 19, 1922; P28327FS.)

RUBUS sp. (Rosaceae), 57228. **Raspberry.** From Naini Tal, United Provinces, India. Seeds presented by Rev. N. L. Rockey. "This is our most common wild yellow raspberry and grows here in great profusion. The bush is tall, thorny, and hairy. The fruit which ripens in early May, is a trifle insipid in its sweetness and is full of seeds, but it is very tender and we enjoy it. I believe it will be valuable for breeding purposes. The native name is 'hissauloo.'" (Rockey.)

SABINEA CARINALIS (Fabaceae), 57078. From Dominica, British West Indies. Seeds presented by Joseph Jones, curator, Botanic Gardens. "This tree is known locally as 'Bois Charibe,' and is one of the most showy of our native plants. It is a very fine flowering tree and I have seen nothing in the Tropics to surpass it as a mass of color. If grown on fairly good land it will not make a good show but if planted on a dry, rocky hillside where it will be scorched by the sun for a period of 3 or 4 months each year, it makes a marvellous display of flowers." (Jones.)

A shrub or small tree, with featherlike leaves and large, scarlet flowers which are borne in clusters of three to five, appearing before the leaves. (Adapted from Grisebach, Flora of the British West Indies, p. 183.)

SOLANUM MAGLIA (Solanaceae), 57219. From Lima, Peru. Tubers presented by the Director, Estacion Central Agronomico. "This species is one of the most interesting of all the tuber-bearing Solanums; it was believed by Darwin to be the wild form of *S. tuberosum* L., the common potato. He first observed it while attached to H. M. S. Beagle on the islands of the Chonos Archipelago, off the western coast of Chile, 'growing in great abundance, on the sandy, shelly soil near the seabeach. The tallest plant was 4 feet in height. The tubers were generally small, but I found one, of an oval shape, 2 inches in diameter: they resembled in every respect, and had the same smell as English potatoes; but when boiled they shrunk much, and were watery and insipid, without any bitter taste. They are undoubtedly here indigenous; they grow as far south, according to Mr. Low, as Lat. 50°, and are called "aquinas" by the Indians of that part. The Chilotan Indians have a different name for them. Professor Henslow, who has examined the dried specimens which I brought home, says that they are the same as those described by Mr. Sabine from Valparaiso, but that they form a variety which by some botanists has been considered specifically distinct. It is remarkable that the same plant should be found on the sterile mountains of central Chile, where a drop of rain does not fall for more than six months, and within the damp forests of these southern islands.' (Darwin, Charles, Journal, January 7, 1835.)

"This plant was referred by Poeppig to *S. tuberosum*: but Georg

Bitter has united it to several very closely allied forms in what he calls a collective species, *S. maglia*, the typical form of which occurs only near the coast; a variety, *collinum* (Dunal) Bitter, in the vicinity of Quillota; and another, *witasekianum* Bitter, in the vicinity of Los Vilos, Chile. Among the species closely allied but regarded as distinct by Bitter are *S. weberbaueri* Bitter, growing among the rocks on the Loma of Mollendo, southern Peru; and *S. medians* Bitter, growing on the rocky slopes of the Cerro de Amancaes, near Lima, Peru.

"The specific name *maglia* is taken from 'malla', an Indian vernacular name for this species, according to Molina; the Spanish colonists called the plant 'papa cimarrona,' or 'wild potato.'" (W. E. Safford.)

SOLANUM TUBEROSUM (Solanaceae), 56803. **Potato.** From Bogota, Colombia. Tubers presented by Brother Ariste Joseph. "The yellow-fleshed potato is one of the most interesting varieties found in the Andean region, home of many remarkable potatoes. The tubers are rather small, and have deep eyes, so that they are not as easily prepared for the table as those of some other varieties; but in point of quality they yield to none that I have tasted. The flesh is the color of American butter, and has a rich, nutty flavor suggesting that of the chestnut. It seems to me the variety might be improved, so as to do away with the objectionable eyes, and that it would then be worth extensive cultivation." (Wilson Popenoe.)

SORGHUM ARUNDINACEUM (Poaceae), 56801. From Salisbury, Rhodesia. Seeds presented by H. G. Mundy, Chief Agriculturist and Botanist of the British South Africa Co., through H. N. Vinall, Bureau of Plant Industry. "This is called locally 'perennial Sudan grass;' it is closely related to Sudan grass. In its natural habitat it grows on heavy, black, fertile lands, and is apparently quite perennial. It does not spread by underground roots, but volunteers very freely from seed, especially where the land has been cultivated. The stems are somewhat woodier and more canelike than those of Sudan grass." (Mundy.)

TACSONIA sp. (Passifloraceae), 57215. From Bogota, Colombia. Seeds presented by Brother Artiste Joseph. "One of the curubas from the region of Bogota, where there are several, esteemed both for their ornamental value and their fruits, which are usually the size of small cucumbers, and of sprightly acid flavor. Worthy of trial in California and Florida." (Wilson Popenoe.)

TETRASTIGMA SP. (Vitaceae), 56804. From Belgian Congo. Seeds presented by C. Passau, Km. 309, near Kongolo. "An annual climber greatly resembling the grape in habit, fruits, and general appearance, with nonwoody stems from 30 to 50 feet in length. The plant seems to

require having its feet in the shade and its head in the sun; it is never found in real forests, but grows up through underbrush." (Passeau.)

THUNBERGIA GRANDIFLORA (Acanthaceae), 57216. From St. Clair, Trinidad, British West Indies. Plants presented by R. T. Williams, superintendent, Royal Botanic Gardens. Var. "alba."

"The typical form of *Thunbergia grandiflora* is well known in tropical gardens, where it is highly esteemed for its large, sky-blue flowers and the ornamental effect of its foliage. The white form (var. 'alba') is less widely cultivated, though perhaps as meritorious as the type. It is a strong-growing climber, useful for covering pergolas and fences, and is sufficiently frost-resistant for cultivation in the warmer parts of Florida and the most favored sections of southern California." (Wilson Popenoe.)

TRIFOLIUM PRATENSE (Fabaceae), 57036. **Red clover.** From Copenhagen, Denmark. Seeds presented by H. N. Knudsen, Danish Royal Agricultural Society. "Tystofte No. 40" originated in a 2-year plat of "Rosendal" clover. Seeds of this variety were sown in 1900, and the clover was thus subjected to the hard winter of 1901. In 1902 the strongest plants from this test were selected; one was No. 40. Later this strain was compared with others in several tests. In 3 or 4 tests, all the clovers made vigorous growth during the first year, and in this respect No. 40 averaged well above the others. In all four tests No. 40 gave the largest crop, fully 20 per cent better than that of the next best. These results agree well with the results of earlier tests at Lyngby and Tystofte in which this strain decidedly surpassed all others. (Adapted from Beretning fra Statens Forsogsvirksomhed I Plantekultur, No. 95, p. 401.)

VITIS sp. (Vitaceae), 57218. **Grape.** From Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. "This was collected on very dry, rocky mountain slopes near Jalisco in Chiapas. The vine bore enormous bunches of red grapes and was in flower at the same time; it had no leaves. The fruits were partly ripe at the end of April and in May, and I believe would make excellent jelly." (Purpus.)

Notes on the Behavior of Previous Introductions.

AMYGDALUS PERSICA (Amygdalaceae), 43133. **Peach.** "Muir's Perfection." From Avondale, Auckland, New Zealand. "The tree which was sent to me in 1921 has matured a very good crop of fruit this year. The peach is medium sized, of very high color, and has a very agreeable acid flavor." (John B. Wiggin, Holly Hill, S. C., July 20, 1923.)

CAPSICUM ANNUUM (Solanaceae), 47010. **Red Pepper.** From Zamboanga, Philippine Islands. "I have raised a number of plants of this variety, all of which bore abundantly. The peppers are fine for seasoning; I tried them for seasoning sausages. Some which I gave away brought very favorable reports." (Mrs. D. B. Small, Valdosta, Ga., July 18, 1923.)

PYRUS CHINENSIS X COMMUNIS (Malaceae), 43444. **Hybrid Pear.** From the Plant Introduction Garden, Chico, Calif. "I received one plant in 1918. This year the tree is carrying several fruits, which are superior to those of Kieffer or LeConte in quality. So far the tree has been entirely free from blight, and is now strong and handsome." (John B. Wiggin, Holly Hill, S. C., July 12, 1923.)

TAMARIX APHYLLA (Tamaricaceae), 45952. **Athel.** From northern Africa. "One of the most important importations made for this section of the country by the United States Department of Agriculture is the evergreen tamarix or athel tree. These hardy desert plants were brought from the valley of the Nile and are used for windbreaks as well as shade trees.

"They have been extensively planted in the Coachella Valley during the past six years and are the most popular tree we have. They often make a growth of 12 feet during the first year, and in three years they make good-sized shade trees.

"After getting started they will probably live longer without water than any other tree excepting the date palm. They are also found to be very well adapted to the San Joaquin Valley, the Imperial and Palo Verde Valleys, and Arizona, New Mexico and the other Southern States." (Robert Barker, Indio, Calif., 1923.)